

Responsible Name **Pierce Administration**

**Section 1. Chemical Product and Company Identification**

Common Name **Terminal Deoxynucleotidyl Transferase (TdT)**

Code 89818B

Supplier Pierce Chemical Company

P.O. Box 117  
Rockford, IL 61105  
USA

815.968.0747 or  
1.800.874.3723

In Case of Emergency CALL CHEMTREC:

800.424.9300  
OUTSIDE US:  
202.483.7616

Print Date 12/5/2001

Validation Date **3/6/2001**

MSDS# Not available.

Manufacturer Pierce Milwaukee LLC  
2202 N. Bartlett Avenue  
Milwaukee, WI 53202-1009  
USA  
414.227.3600

**Section 2. Composition and Information on Hazardous (OSHA) Ingredients**

Name	CAS #	% by Weight	Exposure Limits
1) 2-Mercaptoethanol	60-24-2	0.1-1	Not available.
2) Glycerol	56-81-5	0.1-1	TWA: 10 (mg/m <sup>3</sup> ) from ACGIH (TLV) [United States] TWA: 10 (ppb) from ACGIH (TLV) [United States] [1994] Inhalation TWA: 5 (mg/m <sup>3</sup> ) from OSHA (PEL) [United States] [1989] Inhalation Respirable.

**Section 3. Hazards Identification**

Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this Pierce product.

Emergency Overview **WARNING!**

**BIRTH DEFECT HAZARD**

CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.

HARMFUL IF ABSORBED THROUGH SKIN.

CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:

KIDNEYS, REPRODUCTIVE SYSTEM, MUCOUS MEMBRANES,

GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, EYES, EYE, LENS OR CORNEA.

MAY BE HARMFUL IF SWALLOWED.

Avoid contact with eyes, skin and clothing. Do not ingest. Avoid exposure during pregnancy. Wash thoroughly after handling.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects Non-hazardous in case of inhalation. Severe over-exposure can result in death.

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [2-Mercaptoethanol].  
**MUTAGENIC EFFECTS:** Not available.  
**TERATOGENIC EFFECTS:** Not available.

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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**EU Regulations**

This product is not classified according to the EU regulations.



See Toxicological Information (section 11)

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**Section 4. First Aid Measures**

SKIN: Wash contaminated skin with soap and water.

EYES: Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

Inhalation: Move exposed person to fresh air. If irritation persists, get medical attention.

Ingestion: Do not induce vomiting. If affected person is conscious, give plenty of water to drink. Seek medical attention.

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**Section 5. Fire Fighting Measures**

*Flammability of the Product* Non-flammable.

*Flash Points* Not applicable.

*Fire Hazards in Presence of  
Various Substances* Not applicable.

*Fire Fighting Media  
and Instructions* Not applicable.

*Protective Clothing (Fire)* Not applicable.

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**Section 6. Accidental Release Measures**

*Small Spill and Leak* Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

*Large Spill and Leak* Poisonous liquid.

Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Do not get water inside container. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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## Section 7. Handling and Storage

*Handling* Avoid contact with eyes, skin, and clothing. Do not ingest. Wash thoroughly after handling.

*Storage* Keep container tightly closed. Keep container in a cool, well-ventilated area.

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## Section 8. Exposure Controls/Personal Protection

*Engineering Controls* Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

*Personal Protection*

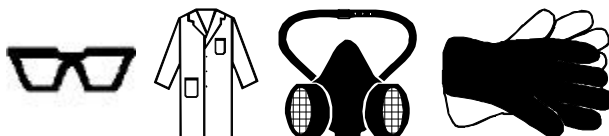
*Eyes* Safety glasses.

*Body* Lab coat.

*Respiratory* Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

*Hands* Gloves.

Protective Clothing  
(Pictograms)



Consult local authorities for acceptable exposure limits.

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## Section 9. Physical and Chemical Properties

*Physical State* and Liquid.

*Appearance*

*Molecular Weight* Not applicable.

*Odor* Sulfurous. (Strong.)

*Taste* Not available.

*Color* Colorless.

*pH (1% Soln/Water)* 6.9 [Neutral.]

*Boiling/Condensation Point* The lowest known value is 157.06°C (314.7°F) (2-Mercaptoethanol). Weighted average: 223.56°C (434.4°F)

*Melting/Freezing Point* May start to solidify at 25°C (77°F) based on data for: 2-Mercaptoethanol. Weighted average: 22.45°C (72.4°F)

*Specific Gravity* Weighted average: 1.18 (Water = 1)

*Vapor Pressure* The highest known value is <0.1 kPa (@ 20°C) (Glycerol).

*Vapor Density* The highest known value is 3.17 (Air = 1) (Glycerol). Weighted average: 2.93 (Air = 1)

*Dispersion Properties* See solubility in water, diethyl ether.

*Solubility* Easily soluble in cold water.  
Soluble in hot water, diethyl ether.

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## Section 10. Stability and Reactivity

*Stability and Reactivity* The product is stable.

*Incompatibility with Various Substances* Slightly reactive to reactive with oxidizing agents.  
Non-reactive with moisture.

*Hazardous Polymerization* Will not occur.

*Hazardous Decomposition Products* Not available.

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## **Section 11. Toxicological Information**

*Toxicity to Animals* Acute oral toxicity (LD50): 190 mg/kg [Mouse]. (2-Mercaptoethanol).  
Acute dermal toxicity (LD50): 150 mg/kg [Rabbit]. (2-Mercaptoethanol).

*Chronic Effects on Humans* **CARCINOGENIC EFFECTS:** Classified None. by NIOSH [2-Mercaptoethanol].  
**DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Glycerol].

*Other Toxic Effects on Humans* Non-irritant for lungs.

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## **Section 12. Ecological Information**

*Toxicity of the Products of Biodegradation* The products of degradation are less toxic than the product itself.

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## **Section 13. Disposal Considerations**

*Waste Information* Waste must be disposed of in accordance with federal, state and local environmental control regulations.

*Waste Stream* Not available.

*Consult your local or regional authorities.*

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## **Section 14. Transport Information**

*Contact Pierce for all transport information.*

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## **Section 15. Regulatory Information**

*HCS Classification* CLASS: Highly toxic.  
CLASS: Target organ effects.  
CLASS: Reproductive toxins.

*U.S. Federal Regulations* TSCA 8(b) inventory: Potassium phosphate dibasic; 2-Mercaptoethanol; Glycerol  
TSCA 8(d) H and S data reporting: Glycerol  
SARA 302/304/311/312 extremely hazardous substances: No products were found.  
SARA 302/304 emergency planning and notification: No products were found.  
SARA 302/304/311/312 hazardous chemicals: 2-Mercaptoethanol; Glycerol  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-Mercaptoethanol: fire, immediate health hazard, delayed health hazard; Glycerol: immediate health hazard, delayed health hazard  
SARA 313 toxic chemical notification and release reporting: No products were found.  
Clean Water Act (CWA) 307: No products were found.  
Clean Water Act (CWA) 311: No products were found.  
Clean air act (CAA) 112 accidental release prevention: No products were found.  
Clean air act (CAA) 112 regulated flammable substances: No products were found.  
Clean air act (CAA) 112 regulated toxic substances: No products were found.

*WHMIS (Canada)* CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).  
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

CEPA DSL: Potassium phosphate dibasic; 2-Mercaptoethanol; Glycerol

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### *International Regulations*

*EINECS* Not available.

*DSCL (EEC)* This product is not classified according to the EU regulations.

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*International Lists* Australia (NICNAS): 2-Mercaptoethanol; Glycerol

Korea (TCCL): 2-Mercaptoethanol; Glycerol

Philippines (RA6969): 2-Mercaptoethanol; Glycerol

**Terminal Deoxynucleotidyl Transferase (TdT)**

State Regulations Pennsylvania RTK: 2-Mercaptoethanol: (generic environmental hazard); Glycerol: (generic environmental hazard)  
Massachusetts RTK: 2-Mercaptoethanol; Glycerol  
California prop. 65: No products were found.

**Section 16. Other Information**

Hazardous Material Information System (U.S.A.)

Health	*	1
Fire Hazard		0
Reactivity		0
Personal Protection		g

National Fire Protection Association (U.S.A.)



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